

In the Claims:

1. (Previously presented) A tissue connector assembly comprising a surgical fastener, which is adapted to assume a loop configuration, a first tissue piercing member and a second tissue piercing member, said surgical fastener having a first end portion and a second end portion, said first tissue piercing member being coupled to said first end portion and said second tissue piercing member being coupled to said second end portion, and

further including a flexible member, said flexible member having a first end portion coupled to said first tissue piercing member and a second end portion coupled to said first end portion of said fastener.

2. Canceled.

3. (Previously presented) The tissue connector assembly of claim 1 further including a second flexible member, said second flexible member having a first end portion coupled to said second tissue piercing member and a second end portion coupled to said second end portion of said fastener.

4. (Original) The tissue connector assembly of claim 3 wherein said first flexible member comprises a suture.

5. (Original) The tissue connector assembly of claim 3 wherein each of said flexible members comprises a suture.

6. (Original) The tissue connector assembly of claim 3 wherein at least one of said flexible members comprises metal.

7. (Previously presented) The tissue connector assembly of claim 1 wherein said flexible member comprises a suture.

8. (Previously presented) The tissue connector assembly of claim 1 wherein said flexible member comprises metal.

9. (Original) The tissue connector assembly of claim 1 wherein at least one of said tissue piercing members comprises a needle.

10. (Original) The tissue connector assembly of claim 1 wherein each of said tissue piercing members comprises a needle.

11. (Original) The tissue connector assembly of claim 1 further including a coupling, said first tissue piercing member and said first end portion of said surgical fastener being coupled to said coupling.

12. (Original) The tissue connector assembly of claim 11 wherein said coupling comprises a tubular member having movable portions and said surgical fastener includes an enlarged portion adapted for receipt in said movable portions.

13. (Original) The tissue connector assembly of claim 12 wherein said enlarged portion is spherical.

14. (Original) The tissue connector assembly of claim 12 wherein said movable portions comprise a plurality of strands.

15. (Original) The tissue connector assembly of claim 14 wherein a plurality of said strands include a notch for receiving a portion of said enlarged portion.

16. (Original) The tissue connector assembly of claim 14 wherein said strands comprise wires.

17. (Original) The tissue connector assembly of claim 14 wherein said strands comprise cables.

18. (Original) The tissue connector assembly of claim 11 including a second coupling, said surgical fastener second end portion and second piercing member being coupled to said second coupling.

19. (Original) The tissue connector assembly of claim 18 wherein said surgical fastener includes an enlarged portion and said second coupling comprises a generally tubular member having movable portions adapted to receive at least a portion of said second portion.

20. (Original) The tissue connector assembly of claim 19 wherein said movable portions comprise a plurality of strands.

21. (Original) The tissue connector assembly of claim 19 wherein a plurality of said strands include a notch for receiving a portion of said enlarged portion.

22. (Original) The tissue connector assembly of claim 18 wherein said second coupling releases the coupling between said second piercing member and said surgical fastener in response to releasing said fastener first end portion coupling.

23. (Original) The tissue connector assembly of claim 18 further including a coil surrounding said surgical fastener and wherein said fastener includes first and second enlarged portions and said fastener first end portion coupling and said second coupling are adapted for receipt of said fastener first and second enlarged portions, respectively, said second coupling including members having portions that have a radially outward bias and extend within said coil when said coil is compressed against said second coupling.

24. (Previously presented) A tissue connector assembly comprising a surgical fastener, which is adapted to assume a loop configuration, a first tissue piercing member and a second tissue piercing member, said surgical fastener having a first end portion and a second end portion, said first tissue piercing member being coupled to said first end portion and said second tissue piercing member being coupled to said second end portion,

further including a coupling, said first tissue piercing member and said first end portion of said surgical fastener being coupled to said coupling,

including a second coupling, said surgical fastener second end portion and second piercing member being coupled to said second coupling,

further including a flexible member and a coil, said flexible member having a portion coupled to said second tissue piercing member and a portion coupled to said second coupling, said coil surrounding said surgical fastener and being compressed against said second coupling, said fastener including an enlarged portion and said fastener first end portion coupling being adapted for receipt of said enlarged portion, said second coupling including a first member fixedly secured to said fastener and a second member slidably coupled to said fastener, and said flexible member being compressed between said second coupling members when said coil is compressed against said slidably coupled member.

25. (Original) The tissue connector assembly of claim 18 wherein said fastener includes a groove and projection and said second coupling includes a member having a groove and projection and a sleeve slidably mounted thereon, said fastener groove and projection being configured to mate with said coupling member groove and projection.

26. (Previously presented) A tissue connector assembly comprising a surgical fastener, which is adapted to assume a loop configuration, a first tissue piercing member and a second tissue piercing member, said surgical fastener having a first end portion and a second end portion, said first tissue piercing member being coupled to said first end portion and said second tissue piercing member being coupled to said second end portion,

further including a coupling, said first tissue piercing member and said first end portion of said surgical fastener being coupled to said coupling,

further including a second coupling, said surgical fastener second end portion and second piercing member being coupled to said second coupling,

further including a flexible member having a portion coupled to said second tissue piercing member and a knotted portion, said second coupling including a tubular member having a bore, said knotted portion being in said bore and said bore having a portion with a diameter less than that of a section of said knotted portion.

27. (Original) The tissue connector assembly of claim 18 wherein said second coupling comprises an annular blade coupled to said second piercing member, said annular blade surrounding and being secured to a portion of said surgical fastener.

28. (Original) The tissue connector assembly of claim 1 wherein said surgical fastener comprises a surgical clip.

29. (Original) The tissue connector assembly of claim 28 wherein said surgical clip comprises a wire.

30. (Original) The tissue connector assembly of claim 29 further including a coil surrounding at least a portion of said wire and having confined ends.

31. (Original) The tissue connector of claim 29 wherein said wire comprises shape memory material.

32. (Original) The tissue connector assembly of claim 28 wherein said surgical clip has an open configuration and a closed configuration.

33. (Currently Amended) A tissue connector assembly comprising a surgical fastener, which is adapted to assume a loop configuration, a first discrete tissue piercing member and a second discrete tissue piercing member, said surgical fastener having a first end portion and a second end portion, said first discrete tissue piercing member being coupled to said first end portion and said second discrete tissue piercing member being coupled to said second end portion,

wherein said surgical fastener comprises a surgical clip,

wherein said surgical clip has an open configuration and a closed configuration, and

wherein said surgical clip is in said closed configuration when in a relaxed state.

34. (Currently Amended) A tissue connector assembly comprising a surgical fastener, which is adapted to assume a loop configuration, a first discrete tissue piercing member and a second discrete tissue piercing member, said surgical fastener having a first end portion and a second end portion, said first discrete tissue piercing member being coupled to said first end portion and said second discrete tissue piercing member being coupled to said second end portion,

wherein said surgical fastener comprises a surgical clip,

wherein said surgical clip has an open configuration and a closed configuration, and

wherein said surgical clip is generally U-shaped when in said open configuration.

35. (Previously presented) A tissue connector assembly comprising a surgical fastener, which is adapted to assume a loop configuration, a first tissue piercing member and a second tissue piercing member, said surgical fastener having a first end portion and a second end portion, said first tissue piercing member being coupled to said first end portion and said second tissue piercing member being coupled to said second end portion,

wherein said surgical fastener comprises a surgical clip,

wherein said surgical clip has an open configuration and a closed configuration, and

wherein said surgical clip assumes a spiral configuration when in said closed configuration.

AMENDMENT AND RESPONSE UNDER 37 C.F.R. §1.111

Application No. 10/653,027

Title: Tissue Connector Apparatus and Methods

Claims 36-82 (Cancelled).